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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/740,927	12/21/2000	Takahiro Ishizuka	003510-069	7352

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EXAMINER

SHOSHO, CALLIE E

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 11/20/2002

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/740,927	Applicant(s) ISHIZUKA ET AL.	
	Examiner Callie E. Shosho	Art Unit 1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 5, 6, 9, 10, 13, 17 and 20-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5-6, 9-10, 13, 17, 20-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. All outstanding rejection except for those described below are overcome by applicants' amendment filed 9/9/02.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 22-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Newly added claim 22, which ultimately depends on claim 1, newly added claim 23, which depends on claim 13, newly added claim 24, which depends on claim 17, and newly added claim 25, which depends on claim 20, each recite that the dye contains certain number of $\text{-NR}^{170}\text{SO}_2\text{R}^{171}$ - substituents. However, claims 1, 13, 17, and 20 each recite substituents of the formula $\text{-NR}^{70}\text{SO}_2\text{R}^{71}$ - and as well as substituents for R^{70} and R^{71} . It is not clear what, if any the difference is between $\text{-NR}^{170}\text{SO}_2\text{R}^{171}$ - and $\text{-NR}^{70}\text{SO}_2\text{R}^{71}$ -. Should the substituent formula in each of claims 22-25 be changed to $\text{-NR}^{70}\text{SO}_2\text{R}^{71}$ -?

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1, 5-6, 9-10, 13, 17, 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sacripante et al. (U.S. 6,025,412) or Tsutsumi et al. (U.S. 6,031,019) either of which in view of JP 03231975.

The rejection is adequately set forth in paragraph 9 of the office action mailed 3/7/02, Paper No. 4, and is incorporated here by reference.

With respect to newly added claims 21-25, it is noted that JP 03231975 discloses that R⁵ which corresponds to presently claimed R⁸ is aralkyl or aryl group and further that the dye comprises at least two or more NRSO₂R groups (page 7, lines 11-13 after formula, page 10, lines 18-20, page 11, lines 11-18, page 14, and page 20, dye 27). An English translation of JP 03231975 is included with this office action.

Response to Arguments

6. Applicants' arguments filed 9/9/02 with respect to Onodera et al. (U.S. 5,753,017), Helling et al. (U.S. 6,313,196), JP 09059552, and JP 11349874 have been fully considered but they are moot in view of the discontinuation of these references against the present claims.

7. Applicants' arguments filed 9/9/02 have been fully considered but, with the exception of arguments relating to Onodera et al., Helling et al., JP 09059552, and JP 11349874, they are not persuasive.

Specifically, applicants argue that:

(a) there is no motivation to combine Sacripante et al. with JP 03231975 given that Sacripante et al. requires the use of dyes not found in JP 03231975.

(b) There is no disclosure in Sacripante et al. that the vinyl polymer has at least one carboxyl group or sulfonic acid group.

(c) There is no motivation, other than improper resort to applicants' own disclosure, to combine Tsutsumi et al. with JP 03231975.

(d) Comparative data establishes unexpected or surprising results over the cited prior art.

(e) There is no disclosure in JP 03231975 of vinyl polymer as presently claimed.

With respect to argument (a), applicants point to col.3, lines 42-45 and col.8, lines 15-24 of Sacripante et al. and argue that Sacripante et al. require the use of dyes which possess two or more hydroxyl, diester, or dicarboxylic acid components and that since such dyes are not found in JP 03231975, there is no motivation to combine Sacripante et al. with JP 03231975.

However, it is noted that the dyes disclosed in col.8, lines 15-24 are just a few embodiments of dyes suitable for use in Sacripante et al. These dyes are utilized when the dye is incorporated into the base resin chain. It is noted that col.4, lines 8-10 disclose that the dye is incorporated into the base chain or attached to the polymer, while col.6, lines 49-53 disclose that any suitable commercially available dye can be used including oil-soluble dyes (same type of dye as presently claimed and also used in JP 03231975). Thus, it is clear that while in one embodiment, Sacripante et al. use dyes which possess two or more hydroxyl, diester, or dicarboxylic acid components, in another embodiment, oil-soluble dyes are utilized. Although there is no explicit disclosure of the specific type of oil-soluble dye used, this is why Sacripante et al. is used in combination with JP 03231975.

With respect to argument (b), it is noted that col.4, lines 36-51 of Sacripante et al. disclose that the polymer has hydrophilic groups attached including carboxylic acid alkali salts and alkali sulfonated groups. These groups are identical to those utilized in the present invention (see present specification page 61, line 8-page 62, line 5, page 63, third full paragraph, and paragraph bridging pages 63-64).

With respect to argument (c), applicants argue that there is no motivation to combine Tsutsumi et al. with JP 03231975 other than improper hindsight. However, it is the examiner's position that there is proper motivation to combine Tsutsumi et al. with JP 03231975.

Tsutsumi et al. disclose ink jet ink which comprises polymer particles colored with oil-soluble dye wherein the polymers include vinyl polymers comprising ionic groups. There is no disclosure in Tsutsumi et al. of specific oil-soluble dye as presently claimed. This is why Tsutsumi et al. is used in combination with JP 03231975, which like Tsutsumi et al., is also drawn to ink jet inks. JP 03231975 discloses oil-soluble dye identical to that presently claimed and further discloses that the motivation for using such dye is that it produces an image with good hue. Thus, given that both JP 03231975 and Tsutsumi et al. are drawn to the same field of endeavor, given that Tsutsumi et al. disclose use of dye which is preferably oil-soluble, and given that JP 03231975 discloses oil-soluble identical to that presently claimed which produces image with good hue, it is the examiner's position that there is motivation to combine the references.

Applicants also argue that there is no motivation to select the claimed dye from the extensive list of dyes disclosed by JP 03231975. However, it is noted that not only does JP

03231975 disclose formula for dye identical to that presently claimed wherein there is extensive overlap between the presently claimed substituents and the reference substituents, but also, JP 03231975 explicitly discloses dyes identical to those presently claimed (see for instance, page 17, dyes 1-3).

With respect to argument (d), applicants point to comparative found in table 2, page 141 of the present specification in order to establish criticality of the presently claimed dye.

However, it is the examiner's position that this data is not successful in establishing unexpected or surprising results over the cited prior art for the following reason.

While the data shows that ink of the present invention exhibits superior color tone, this result is not believed to be unexpected or surprising given that JP 03231975 already discloses that the motivation for using dye as presently claimed is to produce ink with good hue, i.e. color tone, as compared to conventional dyes. Although there is no disclosure in JP 03231975 that the dye would produce ink with superior light resistance and dependency on paper as also disclosed in Table 2, given that JP 03231975 discloses dye identical to that presently claimed, it is clear that ink containing such dye would intrinsically possess good light resistance and dependency on paper as presently claimed.

With respect to argument (e), applicants argue that there is also no motivation to combine Tsutsumi et al. with JP 03231975 given that there is no disclosure in JP 03231975 of vinyl polymer as presently claimed.

However, note that while JP 03231975 does not disclose all the features of the present claimed invention, note that JP 03231975 is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, specific type of oil-soluble dye suitable for use in ink jet inks, and in combination with the primary reference, discloses the presently claimed invention. If the secondary reference contained all the features of the present claimed invention, it would be identical to the present claimed invention, and there would be no need for secondary references.

Additionally, attention is drawn to comparative example 2 of the present specification (Table 2, pages 141-142) which discloses ink comprising dye but no vinyl polymer. It is noted that the ink still possesses good color tone. The color tone, in fact, is equivalent to inks which do comprise vinyl polymer (see inventive examples). Thus, it appears that the presence (or absence) of vinyl polymer does not effect the color tone of the ink. Thus, although JP 03231975 does not disclose the use of vinyl polymer, it is clear that the dye disclosed by JP 03231975 would still impart good color tone or hue to the ink. Thus, there is motivation to combine Tsutsumi et al. with JP 03231975.

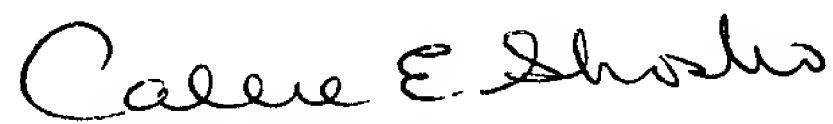
8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Callie E. Shosho
Examiner
Art Unit 1714